

525624

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
18 March 2004 (18.03.2004)

PCT

(10) International Publication Number  
**WO 2004/022069 A1**

(51) International Patent Classification<sup>7</sup>: **A61K 31/66**,  
31/553

(21) International Application Number:  
PCT/US2002/028519

(22) International Filing Date:  
6 September 2002 (06.09.2002)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant (for all designated States except US): **DURECT CORPORATION** [US/US]; 10240 Bubb Road, Cupertino, CA 95014 (US).

(71) Applicants and

(72) Inventors: **PUEL, Jean-Luc** [FR/FR]; 1 Plan de Milouin, Le Ramasol, F-34660 Courmonterral (FR). **PUJOL, Rémy** [FR/FR]; 45 Rue de la République, F-34510 Florensac (FR). **CHRISTEN, Yves** [FR/FR]; 27 Avenue Marceau, F-75116 Paris (FR).

(74) Agent: **BELL, Adam, Warwick**; Durect Corporation, 10240 Bubb Road, Cupertino, CA 95014 (US).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

- with international search report
- with amended claims

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: DELIVERY OF MODULATORS OF GLUTAMATE-MEDIATED NEUROTRANSMISSION TO THE INNER EAR

(57) Abstract: The invention features methods and devices for local delivery of agents that modify glutamate-mediated neurotransmission to the inner ear for treatment of inner ear disorders caused by glutamate-induced hearing loss and/or tinnitus.

WO 2004/022069 A1